

Labour Supply and Unemployment Projections for North East India (2011 - 2031)

* *Phrangstone Khongji*

** *Deigracia Nongkynrih*

Abstract

So far, the studies dealing with labour force and unemployment projections in India remain at the national level, and only a few studies have been undertaken at the state level. There are very little studies in labour force and unemployment projection for North Eastern states of India. In the present study, labour force participation rate and unemployment rate were extrapolated using auto regressive integrated moving average model to obtain the total labour force and unemployed for all the projecting years. The findings revealed that the quantum of an increase in labour force population from 2011 to 2031 for Arunachal Pradesh was 31.1% ; for Assam, it was 41.2% ; for Manipur, it was 47.0% ; for Meghalaya, it was 29.0% ; for Mizoram, it was -0.34% ; for Sikkim, it was 19.4% ; and for Tripura, it was 40.1%. The corresponding increase in the proportion of the unemployed population in the same duration for Arunachal Pradesh was 62.3% ; for Assam, it was 50.3% ; for Manipur, it was 27.1% ; for Meghalaya, it was 66.6% ; for Mizoram, it was 34.8% ; for Sikkim, it was 19.4% ; and for Tripura, it was 50.3%, respectively. One interesting observation, as evident from the projections, was that the gender gap in labor - force participation rate and unemployment rate will permeate further during the years and decades to come. The findings of this paper will help the state governments in formulating the policies to prepare for employment generation in various primary, secondary, and tertiary sectors of the respective state economies.

Keywords : labour force projection, unemployment projection, auto regressive integrated moving average model, labour force participation rate, unemployment rate, North East India

JEL Classification : J01, J11, J21, J23

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India stands to reap benefits from the demographic dividends of an increasing number of young people entering the working age group, and this will lead to a surge in the supply of workforce. The country now stands at the threshold of capitalizing this human resource by providing opportunities in terms of capital and training so as to prepare them for their contribution and expansion of the country's economy. Many studies have shown about the demand of the labour force in various sectors of the Indian economy (Mitra, 2013; Parida, 2015 ; Planning Commission, Labour Employment and Manpower Division, 2008; Poddar & Deb, 2010; Sahu, 2012; Woetzel, Madgavkar, & Gupta, 2017), but on the contrary, not many studies have been conducted on the supply of labour force and very scarce literature about the same issue in states of North Eastern India (NEI) is currently available.

Ministry of Finance, Department of Economic Affairs (2017) noted that the country will be reaping the demographic dividends if there is a good vision, a long term plan, and bold decisions. Thus, population projection

* *Assistant Professor in Statistics*, Department of Basic Sciences and Social Sciences, North Eastern Hill University, Shillong -793 022, Meghalaya. E-mail: phrang2000@yahoo.com

** *Assistant Professor*, Department of Economics, North Eastern Hill University, Shillong -793 022, Meghalaya.

among the active (working group) population will provide insights on the level and trends of the increase in labour size and more importantly, will appraise the likely magnitude of supply of labour, employment, as well as unemployment trends. In this connection, there is a wealth of literature that looks at the past, current, and potential future size of the population and the labour force in the country and discusses the role of changes in the size of the labour force when discussing future economic growth (Lahoti & Swaminathan, 2013 ; Tyers & Golley, 2006). A majority of the studies on labour force projections only disaggregated the population by age and sex and very rare exceptions did consider further characteristics, that is, an urban/rural distinction and even if this is done, the research is done only for some selected major states in the country (Andres, Dasgupta, Joseph, Abraham, & Correia, 2017 ; Loichinger, 2015). The projection of labour force and unemployment is now new to the research community and many researchers have attempted the projection using various forecasting models (Central Statistics Office, 2013; Planning Commission, 2008; Loichinger, 2015; Mitra & Verick, 2013).

As the quantum of labour force can be related to the employment and unemployment rate, the *Employment-Unemployment Survey (2015-16) in India* (Ministry of Labour and Employment, Labour Bureau, Chandigarh, 2016) revealed that 48.4% of the households had only one employed person followed by 30.6% households with two employed persons. Labour force participation rate (LFPR) was estimated to be 50.3% at the national level, and among these, female LFPR was estimated to be 23.7% as compared to 75% for males, and by residential status, the report revealed that unemployment rate was 5.1% in the rural sector; whereas, in the urban sector, the unemployment rate was 4.9%. Khan (2018) revealed that religion was a variable that had a highly significant impact on women's participation in the labour market.

As mentioned in the preceding paragraphs, research that depicts the levels, trends, and projection of labour force and unemployment is still limited when it comes to the NEI. Due to the dearth of literature on the above mentioned topic, this paper attempts to deliberate the subject by focussing on the supply of labour force as well as unemployment in each of the eight states in the region by utilizing the work done by Khongji (2017a) on projection of population by age and sex for states in NEI for 2011- 2031. An attempt is thus made in the present work to highlight the levels, trends, and availability of labour force as well as the quantum of unemployed by age group, gender, and location, that is, rural and urban for every 5 - years interval from the year 2011 up to 2031.

Profile of the Study Area

The NEI covers about 8% of the total geographical area of India, with 4.1% of the total population residing among the hills and plains of the NE region. Hitherto known as the 'Seven Sisters,' NEI represents a contiguous of seven tribal dominated states including Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, and Tripura. Along with Sikkim, they now form a part of the North Eastern Council – a body formed by the Government of India to look into the economic affairs on its behalf. The uniqueness of the people and the region lies in their culture which can be traced as far back as South East Asia. The region is perhaps the only part of India that shares 98% of its borders with other countries and linked internally to other parts of India by what is popularly known as the 'Chicken Neck' or the Siliguri Corridor – a 27 km wide strip of land in West Bengal connecting NEI. After the partition of India, NEI has long been left in a neglected state and suffers from low levels of economic development. Creation of employment and managing the ever increasing population is one of the many problems facing the states in this region.

Data and Methodology

(1) Data Source : Secondary data obtained from the Census of India for 2001 and 2011 has been used to estimate the quantum of labour force and unemployment in NEI up to 2031, that is, for every 5 years - 2016, 2021, 2026,

and 2031. Unlike other secondary data sources, data from Census of India provides information across all states and union territories in India. The relevant information for this study on labour force as well as unemployment disaggregated by age, sex, and residence for smaller states such as those in the NEI is easily available from the Census data, which is thus used accordingly. This study was conducted from March 2017 to May 2018.

(2) Concepts

↪ **Work** : Work is defined as participation in any economically productive activity with or without compensation, wages, or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work, but also includes effective supervision and direction of work. It even includes part time help or unpaid work on farm, family enterprise, or in any other economic activity. Reference period of determining a person as worker and non-worker is one year preceding the date of enumeration. Persons in the age-group 0-4 years have been treated as 'non-workers'.

↪ **Main Workers** : Those workers who had worked for a major part of the reference period, that is, 6 months or more (183 days or more) are treated as main workers.

↪ **Marginal Workers** : Those workers who had not worked for the major part of the reference period, that is, less than 6 months (less than 183 days) form the marginal workers.

↪ **Workers** : Workers include those persons who are main or marginally employed.

↪ **Unemployed**: Unemployed include those persons who are seeking or are available for work.

↪ **Labour Force**: Labour force includes both employed and unemployed, that is, main workers, marginal workers, and those seeking or available for work.

Methodology

The labour force is obtained in the present work by summing the main, marginal workers, and those seeking/available for work, that is, unemployed.

Labour force participation rate (LFPR) is defined by the following formulation :

$$LFPR_{x,x+4} = \left[\frac{LF_{x,x+4}}{TP_{x,x+4}} \right] \times 100 \quad (1)$$

$LF_{x,x+4}$ is the total labour force and $TP_{x,x+4}$ is the total population in the age group $[x, x + 4]$ where, $x = 0, 5, 10, \dots, 80+$. Thus, using the above definition, the LFPR has been obtained by age group, sex, and location.

The objective of the present paper is to project the labour force for all the eight states of NEI, that is, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura for a 5 - year gap and includes the years 2016, 2021, 2026, and 2031 by age group, sex, and residences. The projected level of LFPR is obtained, firstly, by calculating the LFPR from the available Census 2001 and 2011 data for all the respective states, which were then graphically plotted against age group. Secondly, the corresponding levels of the rate for the consecutive 5 years, that is, 2016, 2021, 2026, and 2031 are obtained on the same graphical plot by the use of auto regressive integrated moving average (ARIMA) model (see Figure 5 and Figure 6). Finally, the labour force is computed by

multiplying the projected population as computed by Khongji (2017a) with the corresponding projected levels of LFPR (see Table 1).

Again, the number of unemployed persons, that is, non workers who are seeking or available for work is obtained as follows:

Unemployment rate (UR) is defined by the following formulation:

$$UR_{x,x+4} = \left[\frac{U_{x,x+4}}{LF_{x,x+4}} \right] \times 100 \quad (2)$$

$U_{x,x+4}$ is the number of unemployed, and $LF_{x,x+4}$ is the labour force in the age group $[x, x + 4]$, where $x = 0, 5, 10, \dots, 80+$. Thus, by using the above definition, the ER has been obtained across age group, sex, and location.

Utilizing equation (2), a similar procedure used for projecting LFPR, as given above, is followed to obtain the number of unemployed persons for the years 2016, 2021, 2026, and 2031 by age group, sex, and location for all the states in NEI (excepting Nagaland).

It is to be noted that the exercise of estimating the life expectancy at birth through life table methods was done by Khongji (2017b) for all the NEI states except for Nagaland where data is not compatible with the corresponding curve fitting done for the other states. Due to this reason, the projection of population for the NEI states (except for Nagaland) up to the year 2031 was possible after obtaining the 5-year survival probability based on the e^0_0 values of these states.

Table 1. Projected Population 2016 - 2031 (in Million = 10^6)

States	Sex	Urban					Rural				
		2011	2016	2021	2026	2031	2011	2016	2021	2026	2031
Arunachal Pradesh	Male	1.67	1.81	1.93	2.04	2.10	5.45	5.83	6.17	6.5	6.75
	Female	1.49	1.63	1.75	1.85	1.94	5.19	5.56	5.89	6.2	6.47
Assam	Male	22.58	23.62	24.38	24.93	25.20	136.7	143.6	150.3	157.2	163.4
	Female	21.36	22.88	24.18	25.24	25.63	131.2	140.7	150.1	159.5	165.9
Manipur	Male	4.10	4.47	4.81	5.11	5.38	8.75	9.52	10.29	11.02	11.68
	Female	4.21	4.58	4.93	5.26	5.57	8.55	9.34	10.14	10.94	11.72
Meghalaya	Male	2.96	3.28	3.54	3.73	3.85	11.91	12.95	13.94	14.80	15.54
	Female	2.97	3.29	3.57	3.78	3.93	11.74	12.86	13.91	14.88	15.76
Mizoram	Male	2.85	3.10	3.3	3.46	3.58	2.68	2.88	3.06	3.23	3.38
	Female	2.85	3.10	3.3	3.47	3.61	2.56	2.77	2.95	3.13	3.30
Sikkim	Male	0.80	0.83	0.84	0.85	0.83	2.42	2.48	2.52	2.52	2.48
	Female	0.73	0.76	0.78	0.79	0.79	2.13	2.21	2.27	2.30	2.30
Tripura	Male	4.86	5.08	5.15	5.24	5.23	13.8	14.6	15.2	15.6	15.9
	Female	4.73	4.94	5.10	5.21	5.27	13.2	13.9	14.6	15.2	15.6

Source: Khongji 2017(a)

Analysis and Results

(1) Projected Labour Force: The LFPR is extrapolated using ARIMA model and this rate is multiplied with

Table 2. Projected Labour Force in NEI, 2016 - 2031 (in Million = 10⁶)

States	Sex	Urban					Rural				
		2011	2016	2021	2026	2031	2011	2016	2021	2026	2031
Arunachal Pradesh	Male	0.95	1.07	1.18	1.26	1.32	2.9	3.26	3.61	3.94	4.21
	Female	0.47	0.58	0.69	0.80	0.88	2.35	2.66	2.96	3.23	3.46
Assam	Male	14.64	15.54	16.16	16.45	16.60	80.14	90.31	100.1	109.0	115.1
	Female	6.29	7.05	7.78	8.38	8.93	44.01	51.76	59.77	67.63	73.6
Manipur	Male	2.38	2.64	2.86	3.04	3.21	5.14	5.84	6.53	7.15	7.73
	Female	1.87	2.0	2.09	2.15	2.21	4.3	4.84	5.35	5.82	6.29
Meghalaya	Male	1.58	1.82	2.01	2.15	2.27	5.99	6.91	7.86	8.79	9.56
	Female	0.96	1.10	1.23	1.32	1.4	4.70	5.36	6.0	6.62	7.12
Mizoram	Male	1.61	1.75	1.85	1.91	1.96	1.5	1.65	1.79	1.95	2.09
	Female	1.11	1.11	1.07	1.0	0.88	1.14	1.15	1.12	1.09	1.03
Sikkim	Male	0.5	0.53	0.55	0.56	0.55	1.54	1.68	1.78	1.85	1.87
	Female	0.24	0.26	0.29	0.30	0.30	1.05	1.20	1.33	1.44	1.52
Tripura	Male	3.24	3.4	3.48	3.51	3.48	8.56	9.49	10.33	11.04	11.49
	Female	2.07	2.3	2.51	2.68	2.83	5.77	6.84	7.94	9.01	9.95

Table 3. Projected Labour Force Participation Rate 2016 - 2031 (per 100 of Total Population)

States	Sex	Urban					Rural				
		2011	2016	2021	2026	2031	2011	2016	2021	2026	2031
Arunachal Pradesh	Male	56.9	57.8	58.8	59.7	60.6	53.3	53.3	53.3	53.3	53.3
	Female	31.6	34.8	38.0	41.2	44.4	45.3	45.7	46.1	46.5	46.9
Assam	Male	64.8	66	67.1	68.3	69.5	58.6	60.5	62.3	64.2	66.0
	Female	29.5	31.7	33.9	36.1	38.3	33.5	35.7	37.8	39.9	42.0
Manipur	Male	58.4	60.1	61.9	63.7	65.4	58.1	59.7	61.2	62.7	64.2
	Female	44.4	44.8	45.2	45.7	46.1	50.1	51.3	52.6	53.8	55.0
Meghalaya	Male	53.6	55.6	57.7	59.7	61.8	50.3	49.7	49.1	48.4	47.8
	Female	32.4	34.1	35.8	37.5	39.2	40.1	39.2	38.3	37.4	36.6
Mizoram	Male	56.6	56	55.4	54.8	54.2	56.1	53.9	51.8	49.6	47.4
	Female	39.1	36.6	34.1	31.6	29.0	44.8	39.5	34.1	28.8	23.5
Sikkim	Male	62.3	62.6	62.9	63.1	63.4	63.8	65.9	67.9	70.0	72
	Female	33.4	33.9	34.5	35.0	35.6	49.4	52.1	54.8	57.5	60.2
Tripura	Male	66.7	67.9	69.1	70.3	71.5	61.8	64.0	66.3	68.6	70.8
	Female	43.7	47.2	50.7	54.2	57.7	43.6	47.9	52.3	56.6	61.0

population projected by Khongji (2017a) to obtain the total labour force for all the projecting years (Table 2 and Table 3).

The two decades increase in labour force population from 2011 to 2031 for Arunachal Pradesh is 31.1% ; for Assam, it is 41.2% ; for Manipur, it is 47.0%, for Meghalaya, it is 29.0% ; for Mizoram, it is - 0.34% ; for Sikkim, it is 19.4% ; and for Tripura, it is 40.1%.

Urban male LFPR is expected to increase significantly across all states in the region. The increase in urban male LFPR will largely bridge the rural - urban divide witnessed so far in the NER. This is, however, not to undermine the growth of labour force in the rural areas. Rural male LFPR will also exhibit a similar trend. Thus, overall, male LFPR will show a positive increase during the next three decades in the NER of India.

One interesting observation, as evident from the projections, is that the gender gap will continue to permeate during the years and decades to come. Female LFPR – across rural and urban areas – will continue to remain at lower levels compared to male LFPR. Gender gap in LFPR will not show significant changes in urban areas, and as projected, will remain substantially at double figures. On the other hand, it is projected that the gap will somewhat be bridged in the rural areas of the region.

Interstate variation in LFPR across gender and place of residence is also evident. While all states will witness greater participation in the labour force, the rate of growth, will, however, not be uniform. Improvements in female LFPR, for instance, will be seen for states such as Meghalaya, Arunachal Pradesh, Assam, and Tripura, and other states will only show a marginal improvement by 2031.

(2) Projected Unemployed : The unemployment rate (UR) is extrapolated using ARIMA model, and this rate is multiplied with the projected labour force population to obtain the total number of unemployed (U) persons for all the projecting years (Table 4 and Table 5).

The two decade increase in the proportion of the unemployed population from 2011 to 2031 for Arunachal Pradesh is 62.3%; for Assam, it is 50.3%; for Manipur, it is 27.1% ; for Meghalaya, it is 66.6% ; for Mizoram, it is 34.8% ; for Sikkim, it is 19.4%; and for Tripura, it is 50.3%. Across all states and residence - rural and urban - in NEI, the UR is projected to increase significantly in states such as Arunachal Pradesh, Meghalaya, and Mizoram. On the other hand, UR in Assam, Manipur, Sikkim, and Tripura is expected to exhibit a gradual waning in the next two decades.

By gender and residence, what emerges is that women UR is expected to be significantly high across all states in the NE. The lowest urban UR at 24% in 2031 is expected for Manipur, while lowest rural UR at 13.6% is

Table 4. Projected Unemployed in NEI, 2016 - 2031 (in Million = 10⁶)

States	Sex	Urban					Rural				
		2011	2016	2021	2026	2031	2011	2016	2021	2026	2031
Arunachal Pradesh	Male	0.10	0.11	0.12	0.12	0.13	0.26	0.34	0.39	0.43	0.44
	Female	0.15	0.18	0.19	0.20	0.20	0.30	0.39	0.47	0.52	0.55
Assam	Male	1.81	1.65	1.47	1.27	1.17	7.6	8.2	8.5	8.3	7.4
	Female	3.12	3.14	3.11	2.99	2.9	12.9	16.2	19.9	23.7	26.7
Manipur	Male	0.34	0.34	0.32	0.30	0.26	0.53	0.59	0.66	0.72	0.77
	Female	0.47	0.51	0.55	0.58	0.61	0.63	0.75	0.88	1.03	1.19
Meghalaya	Male	0.17	0.17	0.17	0.157	0.16	0.39	0.51	0.60	0.67	0.67
	Female	0.26	0.28	0.29	0.28	0.29	0.60	0.79	0.97	1.13	1.24
Mizoram	Male	0.16	0.19	0.21	0.23	0.24	0.06	0.07	0.07	0.08	0.07
	Female	0.23	0.28	0.30	0.32	0.32	0.08	0.09	0.09	0.09	0.08
Sikkim	Male	0.04	0.03	0.03	0.02	0.02	0.07	0.07	0.08	0.08	0.07
	Female	0.06	0.05	0.04	0.03	0.02	0.10	0.12	0.13	0.14	0.13
Tripura	Male	0.47	0.40	0.33	0.28	0.24	0.89	0.86	0.82	0.76	0.66
	Female	1.31	1.42	1.53	1.62	1.71	2.29	2.86	3.49	4.17	4.84

Table 5. Projected Unemployment Rate in NEI, 2016 - 2031 (per 100 of Labor Force)

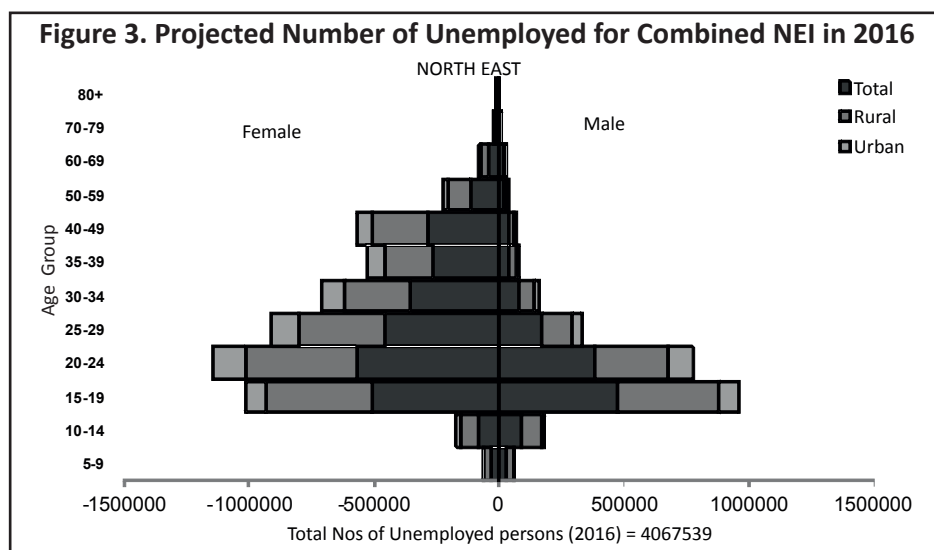
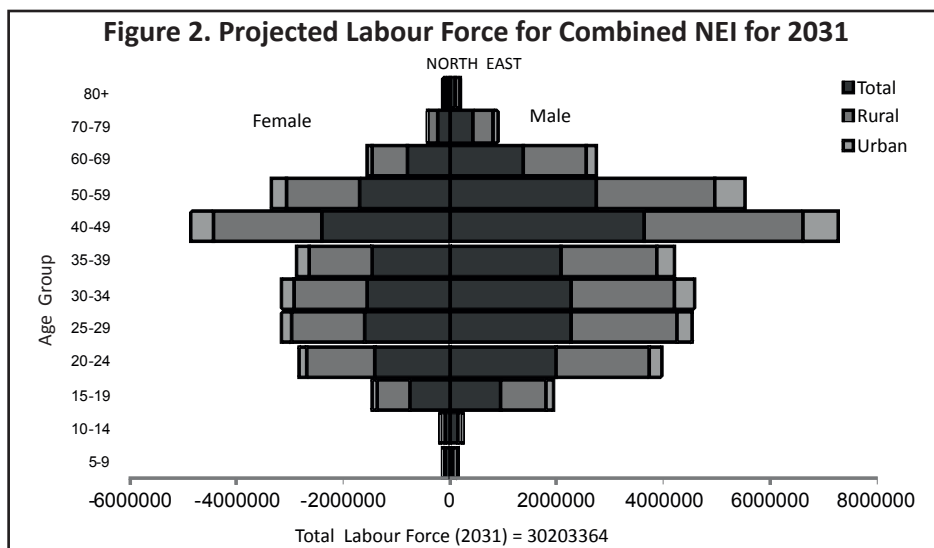
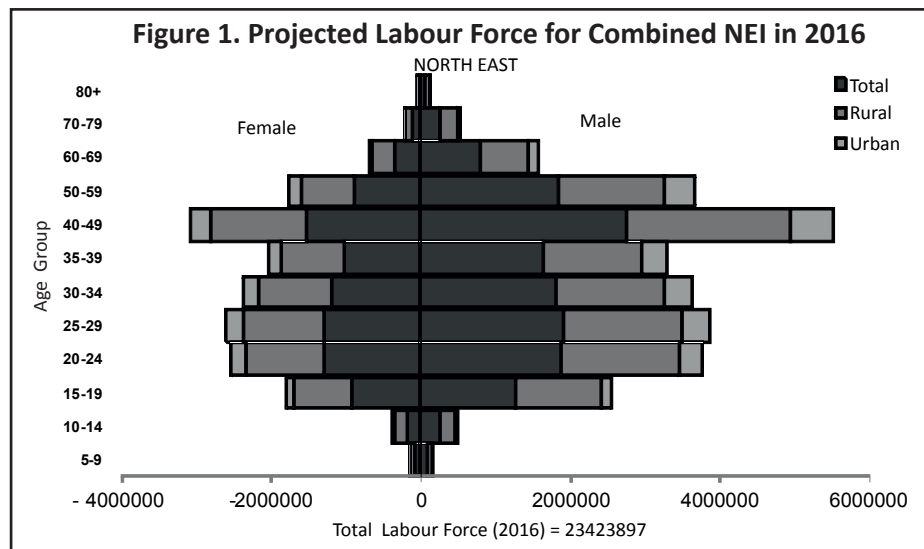
States	Sex	Urban					Rural				
		2011	2016	2021	2026	2031	2011	2016	2021	2026	2031
Arunachal Pradesh	Male	10.5	11.7	12.8	14	15.2	9	11	13.1	15.1	17.1
	Female	32.6	32.9	33.1	33.4	33.7	12.9	15.7	18.5	21.4	24.2
Assam	Male	12.4	10.9	9.4	7.9	6.5	9.5	9.2	9.0	8.7	8.4
	Female	49.6	45.5	41.5	37.4	33.4	29.4	31.8	34.3	36.7	39.2
Manipur	Male	14.5	12.8	11.1	9.3	7.6	10.5	10.5	10.4	10.4	10.3
	Female	25.2	24.9	24.6	24.3	24	14.7	15.6	16.6	17.6	18.5
Meghalaya	Male	11	10.8	10.5	10.3	10.1	6.5	7.7	8.8	10	11.2
	Female	27.2	26.9	26.7	26.5	26.2	12.7	15.2	17.8	20.3	22.9
Mizoram	Male	10.1	12.6	15	17.5	20	3.9	5.2	6.5	7.8	9.1
	Female	20.7	26.8	33	39.2	45.4	6.6	9.0	11.5	13.9	16.4
Sikkim	Male	7.6	6.4	5.2	4	2.9	4.4	4.9	5.4	5.8	6.3
	Female	9.5	4.8	0	0	0	9.7	10.7	11.7	12.6	13.6
Tripura	Male	14.6	12	9.5	7	4.4	10.4	9.6	8.9	8.1	7.4
	Female	63.4	62	60.7	59.3	58	39.7	42.3	45.0	47.6	50.2

expected for Sikkim in 2031. On the other hand, highest urban UR for women will be witnessed for Tripura and Mizoram at 58% and 45%, respectively in 2031.

Variations in urban women UR is expected during the next decade and a half across states. While Assam and Tripura will witness a gradual decline in urban UR for women, Arunachal Pradesh will witness a percentage increase and Mizoram will witness around 19% increase in urban UR for women by 2031. Meghalaya and Manipur will experience an almost 'stable' UR, but at relatively higher levels of around 26% and 24%, respectively. The highest projected rural UR for women is in Assam at 39.2%. Interestingly, rural UR will come into view from 2021 for all states in the NE. The case of Tripura and an almost negligible projected rural UR by 2031 is a case in point.

UR for men, on the other hand, while projected to increase during the next decade, will comparatively be lower than the projected rate for women. Few states such as Arunachal Pradesh, Meghalaya, and Mizoram have been projected to experience high UR for men – both rural and urban – at 10% or more. Other states will relatively experience lower UR at less than 10%. Rural-urban variation is also observed, but not in the same magnitude as that of women URs. Across rural and urban areas, Sikkim will have lower incidence of men UR – around 3% and 6% in rural and urban areas, respectively. Male UR is expected to gradually decline for Assam, Manipur, and Tripura, albeit, on an average, urban unemployment is expected to be higher than rural unemployment in the next decade and a half.

However, gender differential in the unemployment numbers, particularly in the state of Assam, Manipur, and Tripura shows significant bias against females. In other words, the highest proportion of unemployed across all states and by residence will be borne by the female population, especially in these states. Unemployment is largely an urban phenomenon, and this is supported by findings here as the proportion of unemployed increases in the urban areas, this is not evident for rural areas. An implication is that the migration of population from the rural to the urban areas could mitigate the unemployment problem in the next decades for NEI.



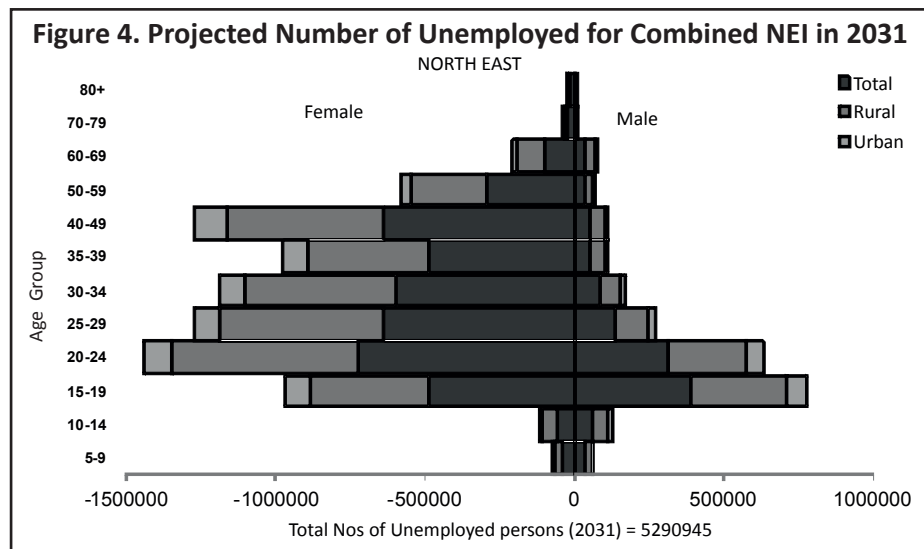


Figure 5. Labour Force Participation Rates (ARIMA Model)

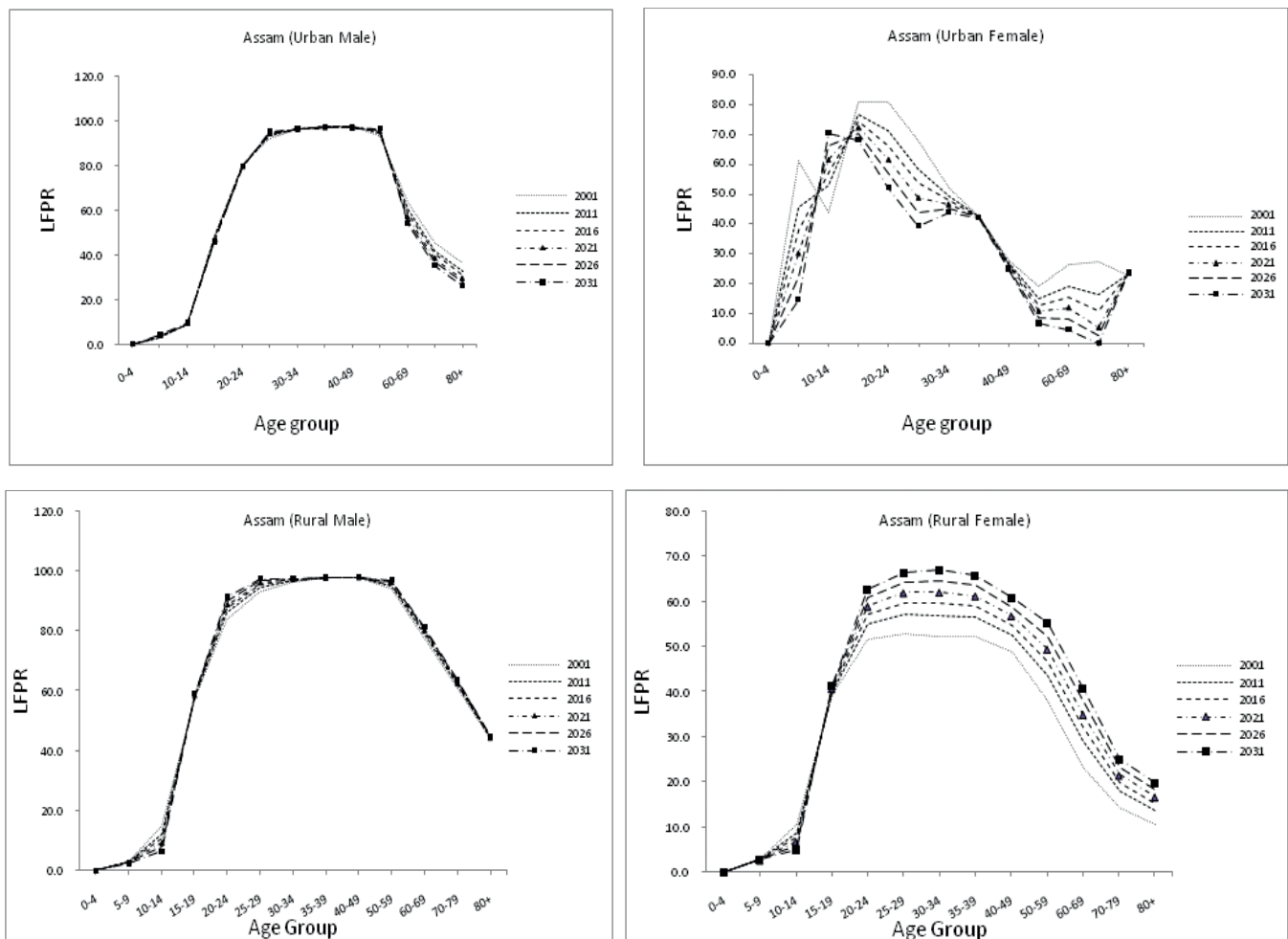


Figure 6. Unemployment Rate (ARIMA Model)

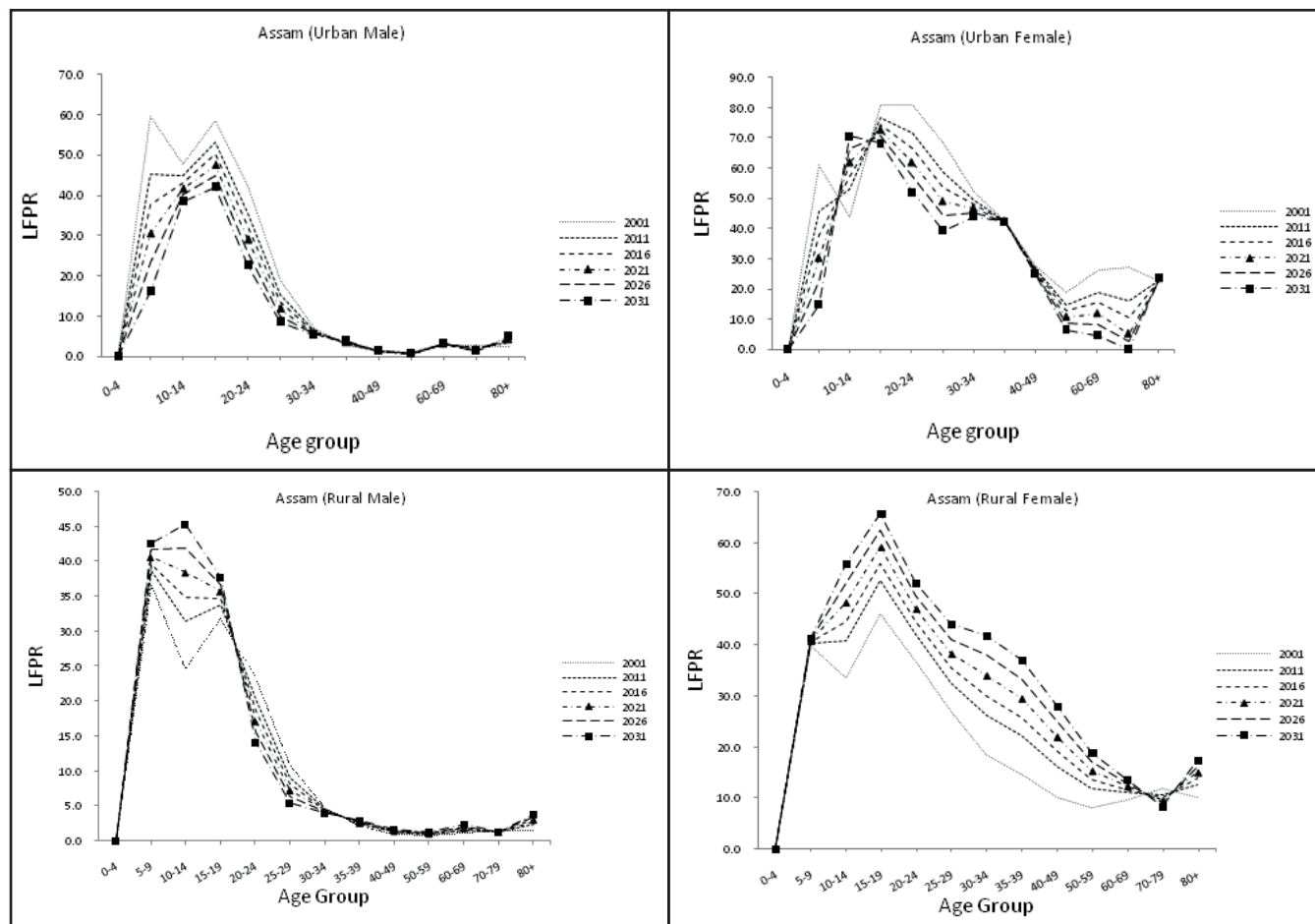
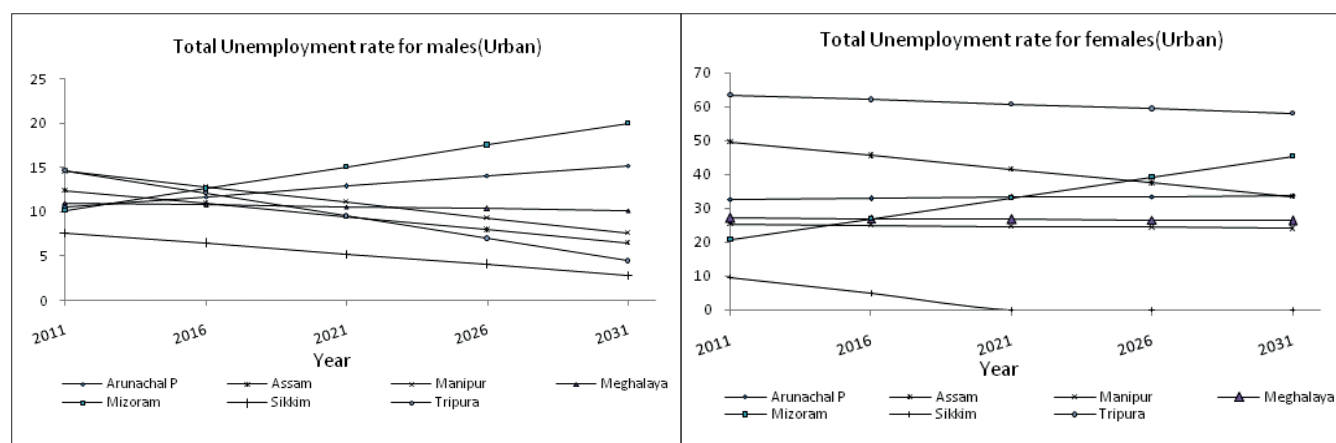
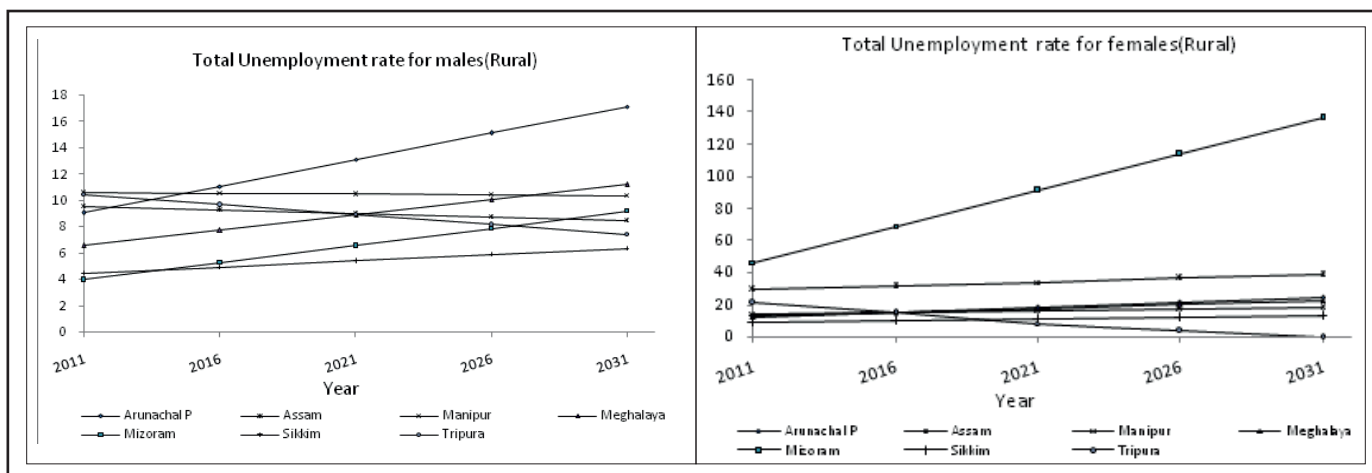


Figure 7. Total Unemployment Rate





Conclusion

The present exercise of projecting the labour force and number of unemployment was also carried by age group in addition to characteristics like sex and residence. To summarize the quantum of labour force and unemployment for the combined NEI region, the distribution of the labour force and number of unemployment is shown in Figures 1 to 4. The Figures depict that there is going to be an increase in the quantum of labour force for the NEI region from 234.2 lakh (23.4 million) in 2016 to 302 lakh (30 million) in the year 2031 and there will also be an increase in the number of unemployment in the region from 40.6 lakh (4 million) in 2016 to 52.9 lakh (5.3 million) for the year 2031.

The labour force and unemployment projections - which are neither predictions nor forecasts - reflect identifiable long-term economic and demographic trends, which have been implicitly or explicitly incorporated into the ARIMA model. Projections are an extrapolation of past and current trends into the future (Savadatti, 2017). These projections do not take into account any current or future policy initiatives. They are not intended to constrain or to advocate specific levels of growth in the state. Moreover, exogenous shocks, such as a natural disaster, a war, or a terrorist attack, could cause the economy to deviate from these trends. These projections are best used as a reference framework for planning, research, and program evaluation.

Policy Implications

This paper, through the projection of labour supply and unemployment, can form a base for studying the demand of labour supply and secondly, it can also be used in the forecasting of employment and unemployment trends of states in the NEI. This information, therefore, can enable the different state governments in tackling unemployment by formulating state specific policies to prepare for employment generation in various primary, secondary, and tertiary sectors of the respective state economies.

Limitations of the Study and Scope for Further Research

The present study can form a basis for further works on forecasting of labour force and unemployment by sectors such as industry, agriculture, and services in states of North East India. The present study can also be replicated on forecasting of labour force and unemployment by characteristics such as religion, caste, education status, and other socioeconomic factors. The present work can be replicated for all states of the country to get an overall picture of the quantum of the supply of labour force up to the year 2031.

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About the Authors

Dr. Phrangstone Khongji, MSc, PhD in Statistics (NEHU, Shillong), MPS (IIPS, Mumbai) is an Assistant Professor of Statistics, Department of BSSS, NEHU. He has a teaching experience of 12 years and has two years experience of guiding PhD scholars. His areas of specialization are: sampling techniques, demography, public health, epidemiology, and econometrics.

Dr. Deigracia Nongkynrih, MA, PhD (NEHU, Shillong) is an Assistant Professor in the Department of Economics, NEHU. She has a teaching experience of 12 years and has 5 years of experience of guiding Ph.D. scholars. Her areas of specialization are: NER economics, labour studies, and economics of development.